



## STRATEGIC BUSINESS PLAN – ISO/TC 344

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### Executive summary

Logistics is a strategic, fundamental and vital industry for the global economy. It plays an irreplaceable role in the prosperity and development of economies worldwide while enabling global production and trade, ensuring the stability of supply chains and effectively promoting economic growth and social development. The World Bank has released the 'Logistics Performance Index 2023', emphasizing that 'Logistics are the lifeblood of international trade.' The industry is currently facing lots of challenges and increased demands, which provide a broad application scenario for the utilization of new technologies, as well as service and management innovations.

Digitization, collaboration and sustainability have become the main trends driving innovation and development in the global logistics industry. The logistics industry is experiencing a significant transformation with the application of cutting-edge technologies and advanced facilities. New advancements such as big data, AI, IoT, unmanned equipment, robots, digital warehouses and industry parks have become integral elements of this evolution. Logistics services such as online logistics, tracing and tracking have emerged alongside these innovations. Moreover, the implementation of effective management methods like 'multimodal transportation', 'reverse logistics' and 'ESG for logistics' not only enhance operational efficiency but also address sustainability concerns, making the logistics industry more environmentally responsible.

The application of new technologies, the innovation of services, and the adoption of advanced management methods have propelled the demand for logistics standardization. This transformative journey continues to redefine the landscape of logistics, providing businesses with opportunities for growth and optimization.

ISO/TC 344 aims to develop and maintain international standards that drive innovation, efficiency, and sustainability in logistics, ensuring a seamless and secure flow of goods from source to destination.

The main focus of ISO/TC 344's scope includes, but is not limited to, the following content: Standardization of services, techniques and management in the field of logistics, specifically including the process of distributing goods from manufacturer or distributor to regional hub, distribution center, and ultimately to businesses such as urban retailers, and to improve the quality, safety and efficiency of distribution operations, and to enhance the stability, flexibility and sustainability of logistics.

ISO/TC 344 plans to initiate 3-4 international standards within 3-5 years and publish 1-2 standards. The priority standards of ISO/TC 344 need to meet the principles of reducing costs, improving quality and efficiency, enhancing safety and resilience, and promoting sustainability in logistics.

The work of ISO/TC 344 will effectively promote the development of innovative logistics, support the achievement of the UN SDGs, particularly SDG1 No Poverty, SDG3 Good Health and Well-being, SDG8 Decent Work and Economic Growth, SDG9 Industry, Innovation and Infrastructure, SDG12 Responsible Production and Consumption, and SDG17 Partnership for the Goals.

## 1 Introduction

### 1.1 ISO technical committees and business planning

The extension of formal business planning to ISO Technical Committees (ISO/TCs) is an important measure which forms part of a major review of business. The aim is to align the ISO work programme with expressed business environment needs and trends and to allow ISO/TCs to prioritize among different projects, to identify the benefits expected from the availability of International Standards, and to ensure adequate resources for projects throughout their development.

### 1.2 International standardization and the role of ISO

The foremost aim of international standardization is to facilitate the exchange of goods and services through the elimination of technical barriers to trade.

Three bodies are responsible for the planning, development and adoption of International Standards: [ISO](#) (International Organization for Standardization) is responsible for all sectors excluding Electrotechnical, which is the responsibility of [IEC](#) (International Electrotechnical Committee), and most of the Telecommunications Technologies, which are largely the responsibility of [ITU](#) (International Telecommunication Union).

ISO is a legal association, the members of which are the National Standards Bodies (NSBs) of some 164 countries (organizations representing social and economic interests at the international level), supported by a Central Secretariat based in Geneva, Switzerland.

The principal deliverable of ISO is the [International Standard](#).

An International Standard embodies the essential principles of global openness and transparency, consensus and technical coherence. These principles are safeguarded through its development in an ISO Technical Committee (ISO/TC), representative of all interested parties, supported by a public comment phase (the ISO Technical Enquiry). ISO and its [Technical Committees](#) are also able to offer the ISO Technical Specification (ISO/TS), the ISO Public Available Specification (ISO/PAS) and the ISO Technical Report (ISO/TR) as solutions to market needs. These ISO products represent lower levels of consensus and have therefore not the same status as an International Standard.

ISO offers also the International Workshop Agreement (IWA) as a deliverable which aims to bridge the gap between the activities of consortia and the formal process of standardization represented by ISO and its national members. An important distinction is that the IWA is developed by ISO workshops and fora, comprising only participants with direct interest, and so it is not accorded the status of an International Standard.

## 2 Business Environment of the ISO/TC

### 2.1 Description of the Business Environment

The following political, economic, technical, regulatory, legal and social dynamics describe the business environment of the industry sector, products, materials, disciplines or practices related to the scope of this ISO/TC, and they may significantly influence how the relevant standards development processes are conducted and the content of the resulting standards:

#### 2.1.1 The current development status of the logistics industry.

Logistics involves the process of delivering the client's goods from the point of supply to the point of receipt, following a well-designed logistics plan, in order to meet the specific order requirements of the logistics client. It entails the integration, coordination, and efficient operation of transportation, storage, loading and unloading, handling, packaging, processing, distribution, information services and value-added services for the smooth flow of goods.

Logistics has now entered the era of Logistics 4.0, characterized by informatization, intelligence, networking, and collaboration. With the rapid development of the new wave of technological revolution, industrial transformation, and global sustainable supply chains, the future of the logistics industry will witness a rapid integration of comprehensive digitalization, lower carbon emissions and decarbonization, marked by these features.

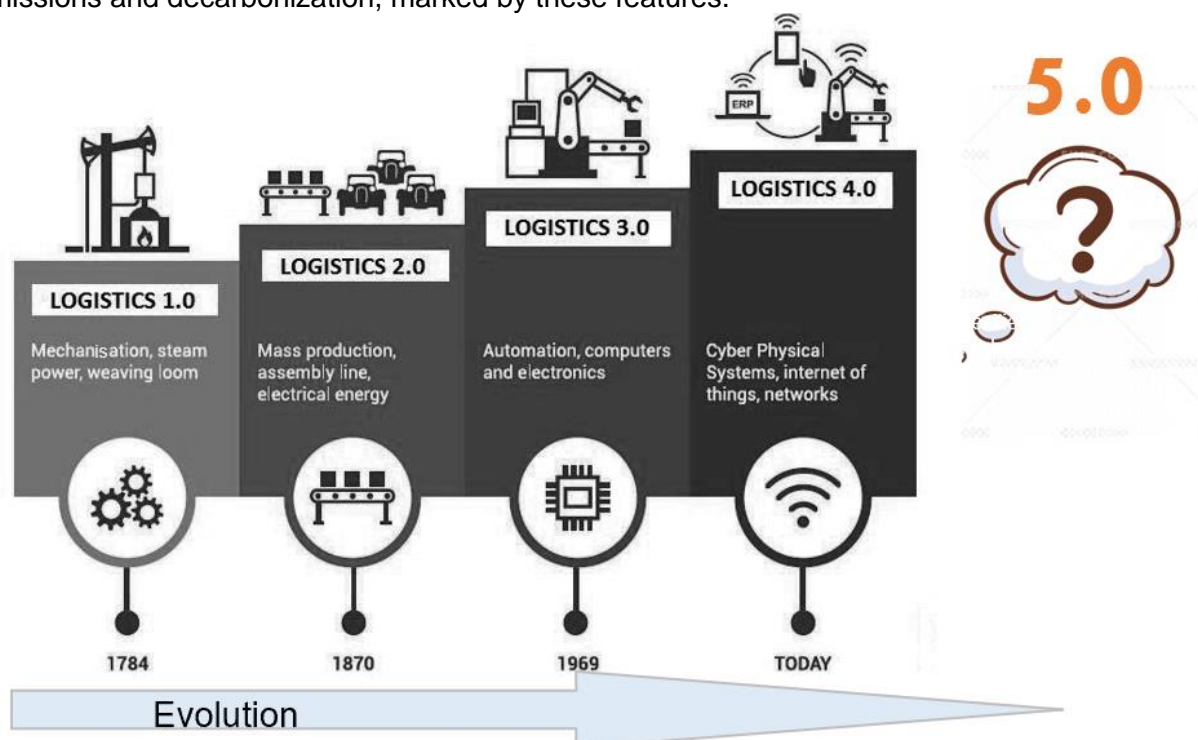


Figure 1 — Stages of logistics evolution<sup>1</sup>

The global logistics market is huge. With a significant improvement in trade facilitation, cross-border trade has experienced rapid development, leading to the rapid growth of the global logistics market.

<sup>1</sup> Izabela Dembińska, "Smart logistics in the evolution of the logistics", European Journal of Service Management (2018): 131.

In 2022, the value of world merchandise exports amounted to \$24.9 trillion<sup>2</sup>. That same year, the global logistics market size was valued at \$9,833.8 billion, and is projected to reach \$16,794.7 billion by 2032, growing at a CAGR of 5.6% from 2023 to 2032<sup>3</sup>.

Logistics is facing new requirements from the development of global manufacturing and trade as well as various challenges such as efficiency, environment, safety and costs.

Global logistics development is characterized by unevenness. On average, global logistics costs account for approximately 11% of GDP. However, in countries with lower efficiency, logistics costs can reach as high as 25%.

Around the world, logistics is facing higher requirements for sustainable development, as the logistics and transport sector contributes just over a third of global carbon dioxide (CO<sub>2</sub>) emissions<sup>4</sup>.

Logistics also faces issues such as supply and demand mismatch, weak control over long-distance logistics, unstable service quality, gaps in management, severe disruptions affecting supply chain stability, and real problems related to the health and occupational risks of logistics practitioners.

### **2.1.2 The trend of innovative logistics**

Innovation in logistics will be crucial in addressing the existing challenges within the industry. Innovations in services, technological advancements and management improvements in logistics can enhance the integration between different stages, improve the efficiency of logistics enterprises, reduce costs, and cater to the needs of all stakeholders, including manufacturers, traders, and small and medium-sized logistics enterprises.

Applications of new technologies will drive the logistics industry towards smarter and more efficient development. The widespread implementation of technologies such as AI, big data, IoT and renewable energy in logistics innovation has given rise to unmanned equipment, robots, digital warehouses and industry parks in logistics. These advancements greatly enhance the level of automation in logistics and supply chain management, providing technological means to optimize processes, foster supply chain collaboration, standardize operations, deepen cooperation, improve efficiency, reduce costs, enhance global supply chain resilience, and elevate global productivity levels. Alongside these innovations, such services as online logistics, tracing and tracking have emerged.

Innovation in management practices and service models will promote the logistics to be sustainable. With the global consensus on sustainable development, improving the management and service performance of logistics service providers (LSP), as well as ensuring logistics and supply chain resilience, have become shared goals within the industry. Logistics ESG (environmental, social, and governance), reverse logistics, protective packaging, cross-border logistics and multimodal transportation have all gained attention as focal points for development.

Standardization efforts serve as effective means to address challenges and propel the development of innovative logistics. Currently, various countries are conducting research on relevant standards of innovative logistics, as an effective cooperation mechanism has yet to be established. Differences exist among countries in terms of policies, regulations, management

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<sup>2</sup> UN handbook of statistics 2023

<sup>3</sup> Allied Market Research

<sup>4</sup> ISO News: Towards a net-zero logistics sector

practices, technology applications and service models. Members need to jointly study and propose solutions to overcome these obstacles.

### **2.1.3 Concerns of Stakeholders**

The stakeholders involved in ISO/TC 344 include large logistics service providers, small and medium-sized logistics enterprises, equipment and technology providers, logistics practitioners, service consigners, consignees, governments, academic and research bodies, industry organizations, and NGOs.

- Large logistics service providers: Promote global logistics activities to optimize service processes, improve management and enhance operational service efficiency, with the goal of meeting customer needs, maintaining competitiveness and achieving customer satisfaction.
- Small and medium-sized logistics enterprises: Through resource sharing, they obtain the support services necessary for their operations, share the benefits of economies of scale, better meet market demands, and reduce operational costs. This enables them to enhance customer confidence in the safety and stability of their cargo.
- Equipment and technology providers: Aim to promote the application, upgrading, and innovation of their technologies in order to expand the market more effectively.
- Logistics practitioners: Can reduce safety risks and improve occupational health and safety.
- Service consigners: Aim to obtain professional logistics services, solve supply chain stability problems, reduce logistics costs, and improve operational efficiency.
- Consignees: Rely on efficient and reliable logistics to ensure timely and stable delivery of purchased goods.
- Governments: Aim to enhance the level of regulation and oversight of the logistics industry, as well as improve the accuracy of decision-making.
- Academic and research bodies: Contribute to a better understanding of the operational mechanisms, technological developments, market trends, etc., in the global logistics industry, promoting innovative development of logistics.
- Industry organizations: Regulate the development of the industry, maintain the normal order of competition and promote the sustainable development of logistics..
- NGOs: Can better meet the sustainable development needs of the logistics industry, promote corporate social responsibility and ethical business practices, protect the environment, as well as safeguard consumer rights.

### **2.1.4 Other Relevant Standards or Initiatives**

Regions and countries with well-developed logistics industries have taken steps to promote the healthy and sustainable development of their logistics sectors and establish consensus among trading partners. They have released numerous standards and initiatives, such as EN 14943, CEN/TS 15472, EN 13876, GB/T 18354, GB/T 24359, KS T 0001, KS S 1001-1, FRANCE LOGISTIQUE 2025, Logistics 2030 Innovation Programme of Germany, and Modern Logistics Development Plan during the 14th Five-Year Plan of the People's Republic of China. ISO has also published standards such as ISO 23354, which specify requirements for new forms of logistics.

## **2.2 Quantitative Indicators of the Business Environment**

The following list of quantitative indicators describes the business environment in order to provide adequate information to support actions of the ISO/TC:

To measure the adoption of ISO/TC 344 deliverables and its engagement with related industries and stakeholders, the TC can review the following indicators:

- The number of participating and observing ISO Member Bodies on the TC and the number of active mirror committees at the national level.
- The number of standards adopted by ISO Member Bodies and referenced in national programs.
- The number of organizations implementing or certifying to standards.
- The number of organizations in liaison with ISO/TC 344 and actively participating.
- The continuity of active participation by ISO Member Bodies in the work of ISO/TC 344.

Industry and global trends that can serve as quantitative indicators of the business environment include, but are not limited to:

- Global logistics market size: The global logistics market size was valued at \$9,833.8 billion<sup>5</sup> in 2022.
- Global merchandise export trade: In 2022, the value of world merchandise exports amounted to \$24.9 trillion<sup>6</sup>.
- Logistics costs as a percentage of GDP: In 2020, global logistics costs amounted to \$9.092 trillion<sup>7</sup>, equivalent to 10.7% of the global GDP for that year.
- Global logistics automation market size: The global logistics automation market (including software, hardware, and services) size was \$30.9 billion<sup>8</sup> in 2022, with an estimated growth to \$90 billion by 2030, projecting a compound annual growth rate (CAGR) of 14.7% during the forecast period (2022-2030).

In order to deepen the understanding of the aforementioned indicators or to collect relevant data, ISO/TC 344 will collaborate with P-member and O-member countries. Data collection efforts will focus on aspects such as the adoption of national standards, market conditions, and other areas mentioned earlier.

Some data may be challenging to collect, especially regarding the value of ISO/TC 344 standards and other deliverables in promoting innovative logistics development among ISO member countries. However, through close cooperation, sharing of best practices, and knowledge exchange, users can gather valuable insights on the positive impact of these standards and deliverables on driving innovation in the logistics industry.

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<sup>5</sup> Allied Market Research

<sup>6</sup> UNCTAD

<sup>7</sup> Armstrong & Associates

<sup>8</sup> GRAND VIEW RESEARCH

### **3 Benefits expected from the work of the ISO/TC**

Benefits expected through the work of ISO/TC 344 include:

- Enhancing operational capabilities in logistics by strengthening service and management. This includes improving logistics infrastructure, upgrading facility modernization and storage capacity, optimizing resource allocation and supply chain networks, as well as improving timeliness and the ability to fully control the entire process.
- Improving logistics efficiency by developing and implementing a series of standards. These standards provide guidance to countries with higher logistics costs, helping them adopt best practices and leverage advancements in technologies like artificial intelligence and renewable energy. Through these efforts, ISO/TC 344 aims to enhance logistics efficiency, leading to cost savings.
- Establishing collaborative logistics service processes by promoting information sharing and transparency, strengthening cooperation among stakeholders, reducing inventory turnover cycles and delays in logistics processes, integrating logistics resources, and coordinating supply-demand relationships.
- Preventing operational risks of logistics by creating opportunities for decent employment, and providing better income and welfare support for relevant personnel and enhancing the professional skills and service capabilities of practitioners.
- Enhancing supply chain resilience by offering guidance on safe transportation, reducing the risks of goods damage, loss, or delay. This enables the supply chain to better withstand external shocks and unforeseen events, ultimately ensuring stability in production.
- Promoting the achievement of the UN SDGs by developing standards for sustainable development, which include requirements, guidelines, and assessments. These standards aim to guide logistics companies in adopting sustainable logistics practices, reducing energy consumption and carbon emissions, promoting industrial development, focusing on social responsibility, improving governance levels, and contributing to the achievement of the UN SDGs.
- Eliminating international trade barriers and promoting international trade facilitation by guiding the international community towards unified consensus through standards, eliminating communication barriers, promoting the harmonization of standards in different regions, facilitating international trade and economic development, and eliminating trade barriers.
- Facilitating the referencing of standards within other standards by broadening the impact of innovative logistics, anticipating that it will be cited as normative references or included in bibliographies for standards developed by industries associated with logistics.
- Supporting the implementation of other international standards by anticipating the inclusion of international standards in the domain of innovation and intelligence as reference documents in relevant standards of this technical committee, establishing liaison mechanisms, actively establishing relationships with technical committees that may be influenced by the logistics industry, actively reporting progress on relevant standards, and supporting the development and application of related standards.

## 4 Representation and participation in the ISO/TC

### 4.1 Membership

Countries/ISO member bodies that are P and O members of the ISO committee – <https://www.iso.org/committee/9824329.html>

Participation ends 25th February, 2024

NO.	P Members (12)	O Members (14)
1	SAC	IRAM
2	SFS	SA
3	AFNOR	ASI
4	DIN	UNMZ
5	GOGUANOR	DS
6	BIS	BSN
7	UNI	INSO
8	KATS	JISC
9	SN	KEBS
10	GOST R	PKN
11	SASO	ASRO
12	SNV	SSC
13		UNE
14		ANSI

### 4.2 Analysis of the participation

From a regional perspective, ISO/TC 344 comprises 12 P members and 14 O members from Asia, Europe, Africa, Oceania, North America, and South America. These members include developed countries, developing countries, and economies in transition. The coverage is comprehensive and demonstrates regional concentration. The majority of P members are located in Asia and Europe, with a higher proportion being relatively developed European countries. In the next step, it is still necessary to attract other countries with developed logistics sectors or countries with promising market prospects to become P members. Additionally, efforts should be made to encourage more O members to participate in TC work and eventually upgrade to P members. These actions are crucial to ensure that the work of TC serves the interests of a broader group and effectively implements the established deliverables.

As of 25th February, 2024, Liaison Committees to ISO/TC 344 include:

- ISO/TC 176 Quality management and quality assurance
- ISO/TC 324 Sharing economy

In the future, international logistics organizations such as the APLF and IFPSM, as well as industries closely related to logistics, may also establish liaisons with this TC. During its operation, ISO/TC 344 will establish liaisons with TC related to innovative, intelligent, new energy, and other technical areas, and strengthen liaisons with ISO/TC 22 (Road vehicles), ISO/TC 154 (Processes, data elements and documents in commerce, industry and administration), ISO/TC 315 (Cold chain logistics), and ISO/TC 321 (Transaction assurance in E-commerce), in order to avoid duplication of future work.

The members of international organizations such as APLF, IFPSM, IFPPS, OPEC, APEC, and RCEP are involved in large-scale logistics markets with a large number of practitioners, and they lead the research and progress of logistics-related technologies. In the future, their concerns will

be taken into account, and the advancement of logistics technology and innovation in service and management models will be promoted.

In the future, ISO/TC 344 will pay active attention to the 2023 Logistics Performance Index (LPI) released by the World Bank, and focus on inviting relevant countries to participate in the activities of TC or become P members to exchange their good practice experiences and jointly promote the development of the industry.

Since the logistics industry is an important part of the global economy, we will promote the preparation of standards by publicizing and promoting more countries' attention, so that more countries can participate and enrich the membership structure of the TC. In order to increase the motivation of P members to participate in technical committee activities, plenary meetings will be held in rotation among members. In addition, regular global forums on innovative logistics will be held to enhance the understanding of stakeholders about the content of ISO/TC 344, create points of interest for non-members, and attract them to contribute their expertise to the work of ISO/TC 344.

## 5 Objectives of the ISO/TC and strategies for their achievement

### 5.1 Defined objectives of the ISO/TC

The scope of ISO/TC 344 is as below:

Standardization of services, techniques and management in the field of logistics, specifically including the process of distributing goods from manufacturer or distributor to regional hub, distribution center, and ultimately to businesses such as urban retailers, and to improve the quality, safety and efficiency of distribution operations, and to enhance stability, flexibility and sustainability in logistics.

The scope will include, but is not limited to:

- Development of general requirements, framework, metrics, guidance, performance indicators, evaluation for innovative logistics, etc.
- Innovative provision of service assurance for logistics (e.g. innovative operation of distribution center, including overseas warehouse in cross-border trade, capacity building for operators, etc.).
- Innovative operation, service and synergy optimization in logistics (e.g. order processing, cargo consolidation, sorting, picking, storage (including overseas warehousing), repackaging and protective handling, loading, unloading, capacity allocation, shipping, distribution, other customized services, etc.).

Excluded: Relevant work within the scopes of the following committees:

ISO/TC 22 Road vehicles

ISO/TC 34 Food products

ISO/TC 51 Pallets for unit load method of materials handling

ISO/TC 122 Packaging

ISO/TC 154 Processes, data elements and documents in commerce, industry and administration

ISO/TC 204 Intelligent transport systems

ISO/TC 268 Sustainable cities and communities

ISO/TC 315 Cold chain logistics

ISO/TC 321 Transaction assurance in E-commerce

ISO/TC 344 aims to develop international standards from the perspectives of new technology applications, innovative management methods, and services innovation. It strives to contribute to innovative logistics practices while avoiding duplication of work with other ISO/TCs.

Standards of ISO/TC 344 will cover, but not be limited to:

- Basic standards such as terminologies or vocabularies.
- General standards such as frameworks, principles, models, operations and guidelines.
- Operation, service, and collaborative optimization standards of logistics tailored to different professional fields and specific requirements.
- Standards for providing service conditions and guarantees for innovative logistics services, such as logistics parks, distribution centers, warehouses, logistics terminals, as well as fleet management, and education and training of logistics professionals.
- Standards related to innovation, including new technology applications, innovative services, and management innovation. These may include service quality evaluation, service performance management, evaluation of services, and sustainable management.
- Other standards associated with innovative logistics.

Firstly, priority will be given to the promotion of basic and general standards, and it is planned to set up 3-4 international standards and publish 1-2 standards within 3-5 years.

Secondly, ISO/TC 344 will also prepare programs related to innovative logistics operation, service and collaborative optimization. In addition, standards related to logistics technology innovation will be developed once the technology is mature and widely adopted.

The TC will develop various types of ISO deliverables, such as IS, TS, PAS and TR, to meet the needs of different stakeholders. It will also promote transparency, inclusiveness, and collaboration with external organizations during the standard-setting process.

In the standards developed by ISO/TC 344, the interrelationships among environmental, social and economic stakeholders will be considered. Principles will be established to promote the innovative transformation of the logistics industry towards sustainability and make a maximum contribution to the UN SDGs.

## **5.2 Identified strategies to achieve the ISO/TC's defined objectives**

Firstly, priority should be given to promoting basic standards and general standards such as terminology, logistics documents, frameworks, principles, and guidelines. These standards will facilitate mutual understanding and consensus among stakeholders, addressing issues in the logistics industry related to costs, efficiency, quality, health, and environmental protection. This will enable innovative logistics to promote sustainability in the logistics industry.

Secondly, by developing service assurance, operational management, and collaborative optimization standards, specific guidance for implementing innovative logistics will be provided to stakeholders. This will clarify the essence of innovative logistics and achieve consistency in understanding the essence. When the technology matures, innovative technological contents will be incorporated into the standardization process to lead innovative development in the field of logistics.

To ensure inclusiveness, transparency, and representation of a wider range of stakeholders' interests, we will actively establish connections with international organizations in the logistics industry, including APLF, IFPSM, and IFPPS, etc. We will also establish liaisons with ISO/TC 22, ISO/TC 154, ISO/TC 315, ISO/TC 321, etc., to avoid duplication of work.

In the process of standard development, reference will be made to relevant standards from other countries or regions to enhance the broad applicability of TC work. For example: ISO 23354, CEN/TS 15472, EN 14943, EN 13876, KS T 0001, KS S 1001-1, GB/T 18354, GB/T 41834, GB/T 42928.

To ensure the smooth progress of TC work, ISO/TC 344 will hold one plenary meeting annually, either online or offline.

The preferred deliverable for this TC is IS. However, considering the continuous development of technologies such as AI, big data and new energy, as well as the diversification of innovative logistics forms, shorter-term deliverables such as TS or TR can also be developed as appropriate.

At the first annual meeting in May, ISO/TC 344 will discuss and confirm the establishment of corresponding WGs based on project proposals. In addition, SGs will be set up for new proposals or surveys, and a CAG will be formed as needed.

## **6 Factors affecting completion and implementation of the ISO/TC work programme**

We need to consider some negative factors that may affect the work of this TC:

Currently, there are only 12 P members, despite the significant impact of the logistics industry. With a relatively small number of member countries, the participation of members states needs to be improved.

Innovative logistics is a cutting-edge field that integrates multiple disciplines, requiring the involvement of experts from various fields and the participation of a wide range of stakeholders.

Regulations vary among different countries. Logistics models are diverse, and our understanding of their standard requirements may be insufficient.

Liaison and synergy with other TCs may also be an important influencing factor.

## 7 Structure, current projects and publications of the ISO/TC

### Information on ISO online

The link below is to the TC's page on ISO's website:

ISO/TC 344 on ISO Online : <https://www.iso.org/committee/9824329.html>

Click on the tabs and links on this page to find the following information:

- About (Secretariat, Committee Manager, Chair, Date of creation, Scope, etc.)
- Contact details
- Structure (Subcommittees and working groups)
- Liaisons
- Meetings
- Tools
- Work programme (published standards and standards under development)

### Reference information

[Glossary of terms and abbreviations used in ISO/TC Business Plans](#)

[General information on the principles of ISO's technical work](#)